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B1  
a constant cross sectional area throughout the brick. Cross sectional area is defined perpendicular to the longitudinal flow path. Towards the downstream portion of the main catalyst brick 220 a conical portion 322 is formed. The conical portion 322 has a middle section 324 that extends downstream further than the side sections 326. The side sections 326 are angled inward at a greater degree than the degree by which the exit portion 112 of the shell 106 is angled inward, thereby providing an area 327 that increases in the downstream direction. It should be appreciated that the middle section 324 has an exit surface 328 that is perpendicular to the exhaust gas flow of the system and is slightly smaller in diameter 332 than the exit pipe 116 whose diameter is referenced by numeral 330.

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**IN THE CLAIMS:**

Please amend claims 10, 11, 13, 15-16, and 20-21 in accordance with the following rewritten claims in clean form. Applicants include herewith an Attachment for Claim Amendments showing a marked up version of the amended claims.

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10. (AMENDED) A catalyst system for a motor vehicle having an engine with an exhaust port that carries exhaust gases away from the combustion chamber of the engine, wherein the exhaust gases leave the combustion chamber and flow in a downstream direction by first entering the exhaust port, said catalyst system comprising:

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a shell with at least one conduit extending therefrom and including a downstream end and an exit portion having a diameter formed on the downstream end, the exit portion decreases in diameter in the downstream direction;

a conically shaped catalyst disposed contiguous to the exhaust port of the engine and including cells having a cross sectional area, the cross sectional of at least one of the cells of said conically shaped catalyst increases in the downstream direction; and

a main brick catalyst having an angled front face disposed downstream of said conically shaped catalyst, wherein said main brick catalyst includes a downstream end having a conically

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B2  
shaped formation having a diameter, said diameter of said conically shaped formation decreases in the downstream direction at a rate greater than the rate at which said exit portion of said shell decreases in diameter in the downstream direction, wherein the shell encloses the main brick catalyst and the at least one conduit houses the conically shaped catalyst and the at least one conduit is attached to the engine and circumscribes the exhaust port when attached, and wherein said conically shaped catalyst includes a rear face disposed at an acute angle from said angled front face of said main brick catalyst.

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11. (TWICE AMENDED) A catalyst system for a motor vehicle having an engine with a plurality of exhaust ports that carry exhaust gases away from the combustion chamber of the engine, wherein the exhaust gases leave the combustion chamber and flow in a downstream direction by first entering the exhaust ports, said catalyst system comprising:

B3  
a shell with a plurality of conduits extending therefrom,

a plurality of conically shaped catalysts disposed contiguous to the exhaust ports of the engine; and

a main brick catalyst having a front face that includes a plurality of angled surfaces, wherein each of the plurality of angled surfaces is disposed downstream of a respective one of said plurality of conically shaped catalysts, wherein the shell houses the main brick catalyst and the plurality of conduits house the plurality of conically shaped catalysts and the plurality of conduits are attached to the engine and circumscribe the exhaust ports when attached.

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- B4  
13. (TWICE AMENDED) The catalyst system as set forth in claim 12, wherein each of said plurality of conically shaped catalysts include a rear face that is substantially parallel to a respective one of said plurality of angled surfaces of said main brick catalyst.

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15. (TWICE AMENDED) The catalyst system as set forth in claim 11, wherein each of said plurality of conically shaped catalysts include cells having a cross sectional area, said cross sectional area of at least one of said cells of said plurality of conically shaped catalysts increases in the downstream direction.

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B5 16. (TWICE AMENDED) The catalyst system as set forth in claim 15, wherein each of said plurality of conically shaped catalysts include a metallic substrate.

20. (AMENDED) A catalyst system for a motor vehicle having an engine with a plurality of exhaust ports that carry exhaust gases away from the combustion chamber of the engine, wherein the exhaust gases leave the combustion chamber and flow in a downstream direction by first entering the exhaust ports, said catalyst system comprising:

a shell with a plurality of conduits extending therefrom and including a downstream end and an exit portion having a diameter formed on the downstream end, the exit portion decreasing in diameter in the downstream direction;

a plurality of conically shaped catalysts disposed contiguous to the exhaust ports of the engine; and

a main brick catalyst having a front face that includes a plurality of angled surfaces, wherein each of the plurality of angled surfaces is disposed downstream of a respective one of said plurality of conically shaped catalysts, wherein said main brick catalyst includes a downstream end having a conically shaped formation having a diameter, said diameter of said conically shaped formation decreases in the downstream direction at a rate greater than the rate at which said exit portion of said shell decreases in diameter in the downstream direction, and wherein the shell houses the main brick catalyst and the plurality of conduits house the plurality of conically shaped catalysts and the plurality of conduits are attached to the engine and circumscribe the exhaust ports when attached.

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21. (TWICE AMENDED) A catalyst system for a motor vehicle having an engine with a plurality of exhaust ports that carry exhaust gases from the combustion chamber of the engine, wherein the exhaust gases leave the combustion chamber and flow in a downstream direction by first entering the exhaust ports, said catalyst system comprising:

a plurality of conically shaped catalysts disposed contiguous to the plurality of exhaust ports of the engine, said plurality of conically shaped catalysts have a front face and a rear face, said rear face being larger than said front face, each of said plurality of conically shaped catalysts also include a metal substrate and a plurality of cells that vary in size, said cell size increasing in the downstream direction;

β<sup>1</sup>) a shell that includes a plurality of tubes extending therefrom, each of said plurality of tubes receive a respective one of said plurality of conically shaped catalysts, said shell includes an exit portion that decreases in diameter in the downstream direction and said plurality of tubes are attached to the engine and circumscribe the exhaust ports;

a main brick catalyst disposed within said shell, said main brick catalyst is substantially cylindrical in shape and disposed downstream from said plurality of conically shaped catalysts, said main brick includes an angled front face and a downstream end, said downstream end has a conically shaped formation that decreases in diameter in the downstream direction at a rate greater than the rate at which said exit portion of said shell decreases in the downstream direction, said main catalyst brick includes a ceramic substrate; and

an exhaust pipe attached to said exit portion of said shell.